

PROPOSED REMEDIAL ACTION PLAN

Loohns Corning
State Superfund Project
Corning, Steuben County
Site No. 851028
February 2012



Prepared by
Division of Environmental Remediation
New York State Department of Environmental Conservation

PROPOSED REMEDIAL ACTION PLAN

Loohns Corning
Corning, Steuben County
Site No. 851028
February 2012

SECTION 1: SUMMARY AND PURPOSE OF THE PROPOSED PLAN

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), is proposing a remedy for the above referenced site. The disposal of hazardous wastes at the site resulted in threats to public health and the environment that were addressed by actions known as interim remedial measures (IRMs), which were undertaken at the site. An IRM is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the remedial investigation (RI) or feasibility study (FS). The IRMs undertaken at this site are discussed in Section 6.2.

Based on the implementation of the IRM(s), the findings of the RI indicate that the site no longer poses a threat to human health or the environment; therefore No Further Action is the remedy proposed by this Proposed Remedial Action Plan (PRAP). A No Further Action remedy may include site management, which will include continued operation of any remedial system installed during the IRM and the implementation of any prescribed institutional controls/engineering controls (ICs/ECs) that have been identified as being part of the proposed remedy for the site.

The IRM(s) conducted at the site attained the remediation objectives identified for this site, for the protection of public health and the environment. This PRAP identifies the IRM(s) conducted and discusses the basis for No Further Action.

The New York State Inactive Hazardous Waste Disposal Site Remedial Program (also known as the State Superfund Program) is an enforcement program, the mission of which is to identify and characterize suspected inactive hazardous waste disposal sites and to investigate and remediate those sites found to pose a significant threat to public health and environment.

The Department has issued this document in accordance with the requirements of New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375. This document is a summary of the information that can be found in the site-related reports and documents in the document repository identified below.

SECTION 2: CITIZEN PARTICIPATION

The Department seeks input from the community on all PRAPs. This is an opportunity for public participation in the remedy selection process. The public is encouraged to review the reports and documents, which are available at the following repository:

Southeast Steuben County Library
300 Nasser Civic Center Plaza
Suite 101
Corning, NY 14830
Phone: 607-936-3713

A public comment period has been set from:

2/27/2012 to 3/27/2012

A public meeting is scheduled for the following date:

3/7/2012 at 6:00 PM

Public meeting location:

Corning Fire Department, 1 Corning Boulevard, Corning, NY

At the meeting, the findings of the remedial investigation (RI) will be presented along with a summary of the proposed remedy. After the presentation, a question-and-answer period will be held, during which verbal or written comments may be submitted on the PRAP.

Written comments may also be sent through 3/19/2012 to:

Matthew Dunham
NYS Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, NY 12233
mddunham@gw.dec.state.ny.us

The Department may modify the proposed remedy presented in this PRAP based on new information or public comments. Therefore, the public is encouraged to review and comment on the proposed remedy identified herein. Comments will be summarized and addressed in the responsiveness summary section of the Record of Decision (ROD). The ROD is the Department's final selection of the remedy for this site.

Receive Site Citizen Participation Information By Email

Please note that the Department's Division of Environmental Remediation (DER) is "going

paperless" relative to citizen participation information. The ultimate goal is to distribute citizen participation information about contaminated sites electronically by way of county email listservs. Information will be distributed for all sites that are being investigated and cleaned up in a particular county under the State Superfund Program, Environmental Restoration Program, Brownfield Cleanup Program, Voluntary Cleanup Program, and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at <http://www.dec.ny.gov/chemical/61092.html>

SECTION 3: SITE DESCRIPTION AND HISTORY

Location: The Loohns Cleaners Site is located at 37 East Pulteny Street in a mixed commercial and residential area in the City of Corning, Steuben County.

Site Features: The main site feature is a one story multi-tenant retail building. Residential properties are located to the north of the Site with commercial properties located to the east, west and south of the Site. The City of Corning Public Water Supply Well Number Three is located approximately 1000 feet south of the Site, at the intersection of Riverside and Ferris Streets.

Current Zoning/Use(s): There is a strip mall at the site comprised of several active businesses. The site is zoned for commercial use.

Historic Use(s): The current building was constructed in 1971. A dry cleaner occupied one of four retail spaces at this site from 1973 until 2007.

Site Geology and Hydrogeology: The Site is located in the Cohocton/Chemung River Valley, which runs east-west. Overburden soils at the Site consist primarily of silts, sands and gravel. The Chemung River is a local groundwater discharge area. Groundwater at the site is encountered at approximately 10 to 12 feet below ground surface (bgs), and flows to the southeast towards the Chemung River.

A site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, alternatives (or an alternative) that restrict(s) the use of the site to residential use (which allows for restricted-residential use, commercial use and industrial use) as described in Part 375-1.8(g) is/are being evaluated in addition to an alternative which would allow for unrestricted use of the site.

A comparison of the results of the investigation to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is included in the Tables for the media being evaluated in Exhibit A.

SECTION 5: ENFORCEMENT STATUS

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past or present owners and operators, waste generators, and haulers.

The PRPs for the site, documented to date, include:

Loohns Cleaners & Launderers, Inc

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A Remedial Investigation (RI) has been conducted. The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the site. The field activities and findings of the investigation are described in the RI Report.

The following general activities are conducted during an RI:

- Research of historical information,
- Geophysical survey to determine the lateral extent of wastes,
- Test pits, soil borings, and monitoring well installations,
- Sampling of waste, surface and subsurface soils, groundwater, and soil vapor,
- Sampling of surface water and sediment,
- Ecological and Human Health Exposure Assessments.

6.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform to promulgated standards and criteria that are directly applicable or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, Criteria and Guidance are hereafter called SCGs.

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media-specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. The tables found in Exhibit A list the applicable SCGs in the footnotes. For a full listing of all SCGs see: <http://www.dec.ny.gov/regulations/61794.html>

6.1.2: RI Information

The analytical data collected on this site includes data for:

- groundwater
- soil
- soil vapor
- indoor air

The data have identified contaminants of concern. A "contaminant of concern" is a hazardous waste that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized in Exhibit A. Additionally, the RI Report contains a full discussion of the data. The contaminant(s) of concern identified at this site is/are:

Tetrachloroethylene (PCE)

Based on the investigation results, comparison to the SCGs, and the potential public health and environmental exposure routes, certain media and areas of the site required remediation. These media were addressed by the IRM(s) described in Section 6.2. More complete information can be found in the RI Report and the IRM Construction Completion Report.

6.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before issuance of the Record of Decision.

The following IRM(s) has/have been completed at this site based on conditions observed during the RI.

IRM - Soil removal

In December 2010, a soil-removal IRM was completed to mitigate impacted soils behind the former dry cleaner space. The IRM included excavation and off-site disposal of contaminated soil and soil sampling from the excavation limits to document any remaining contaminant concentrations. The IRM removed all accessible PCE-impacted soils. Post-IRM on-site groundwater samples (June 2011) exhibited PCE concentrations that were less than applicable SCGs

IRM - SVE

In January 2012, a soil vapor extraction system was installed in the former dry cleaner. The system draws soil vapor from a sub-slab extraction point located within the former dry cleaner space and will serve to reduce residual PCE impact to sub-slab soils.

Soil vapor extraction (SVE) is an in-situ technology used to treat volatile organic compounds (VOCs) in soil. The process physically removes contaminants from the soil by applying a vacuum to a SVE well that has been installed into the vadose zone (the area below the ground but above the water table).

6.3: Summary of Human Exposure Pathways

This human exposure assessment identifies ways in which people may be exposed to site-related contaminants. Chemicals can enter the body through three major pathways (breathing, touching or swallowing). This is referred to as *exposure*.

Excavation of contaminated soil, followed by backfilling with clean soil, has reduced the potential for people to come in contact with contamination in soil. In addition, contact with the contaminated soil at the site is not likely because the remaining contamination is not accessible below the on-site building and pavement. Contaminated groundwater is not being used for drinking water, as the area is served by the public water supply. Volatile organic compounds in the groundwater may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. Potential exposure via soil vapor intrusion will be evaluated at the on-site and adjacent off-site buildings to determine whether the remedial measure is effective at preventing exposure. This evaluation will include provisions for mitigation if necessary.

6.4: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water.

Based upon the resources and pathways identified and the toxicity of the contaminants of ecological concern at this site, a Fish and Wildlife Resources Impact Analysis (FWRIA) was deemed not necessary for OU 01.

Based upon investigations conducted to date, the primary contaminants of concern for this site were tetrachloroethene (PCE) and its associated degradation products. PCE was found in the on-site soil, in the vicinity of the rear door of the former dry cleaners, at concentrations of 311 ppm, 70 ppm and 7.3 ppm compared to a Restricted Use Soil Cleanup Objectives for the Protection of Groundwater of 1.3 ppm.

PCE and its associated degradation products are also found in groundwater moderately exceeding groundwater standards (typically 5 ppb), with a maximum concentration of 87 ppb.

The site is located in a residential/commercial area in the City of Corning. There are no fish or wildlife receptors present.

6.5: Summary of the Remediation Objectives

The objectives for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. The goal for the remedial program is to restore the site to pre-disposal conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the contamination identified at the site through the proper application of scientific and engineering principles.

The remedial action objectives for this site are:

Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.

RAOs for Environmental Protection

- Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.
- Remove the source of ground or surface water contamination.

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.

Soil Vapor

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

SECTION 7: SUMMARY OF PROPOSED REMEDY

The Department believes that the IRM has accomplished the remediation goals and satisfied the SCGs for the site provided that it continues to be operated and maintained in a manner consistent with the design.

Based on the results of the investigations at the site, the IRMs that have been performed, and the evaluation presented here, the Department is proposing No Further Action with continued operation of the SVE system and the implementation of ICs/ECs as the proposed remedy for the site. The Department believes that this remedy is protective of human health and the environment and satisfies the remediation objectives described in Exhibit B.

Table 3 of Exhibit A shows how each of the Remedial Objectives has been addressed.

The elements of the IRM already completed and the institutional and engineering controls are listed below:

1. Imposition of an institutional control in the form of an environmental easement for the controlled property that will:

a. requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);

b. allows the use and development of the controlled property for restricted residential, commercial and industrial uses as defined by Part 375-1.8(g), although land use is subject to local zoning laws; and

c. requires compliance with the Department approved Site Management Plan.

2. A Site Management Plan is required, which will include the following:

a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

Institutional Controls:

The Environmental Easements discussed above.

Engineering Controls:

The soil vapor extraction system discussed above.

This plan includes, but may not be limited to:

i. an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;

ii. description of the provisions of the environmental easements including any land use and groundwater use restrictions;

iii. provisions for the management and inspection of the identified engineering controls;

iv. maintaining site access controls and Department notification;

v. the operation of the components of the remedy would continue until the remedial objectives have been achieved, or until the Department determines that continued operation is technically impracticable or not feasible; and

vi. the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

- i. monitoring of the SVE system to assess the performance and effectiveness of the remedy, which will include soil vapor intrusion sampling within the on-site building to ensure the SVE system is effective at preventing exposure via soil vapor intrusion;
- ii. monitoring of groundwater to assess the performance and effectiveness of the remedy; and
- iii. a schedule of monitoring and frequency of submittals to the Department.

Exhibit A

Nature and Extent of Contamination

This section describes the findings of the Remedial Investigation for all environmental media that were evaluated. As described in Section 6.1, samples were collected from various environmental media to characterize the nature and extent of contamination.

For each medium, a table summarizes the findings of the investigation. The tables present the range of contamination found at the site in the media and compares the data with the applicable SCGs for the site. For comparison purposes, the SCGs are provided for each medium that allows for unrestricted use. For soil, if applicable, the Restricted Use SCGs identified in Section 6.1.1 are also presented.

Waste/Source Areas

As a result of the previous Site operations, as a dry cleaner, chlorinated solvents were released to the ground surface, where they flowed/leaked into the soils at the Site. Site investigations identified a source area at the rear of the Site building at the back door of the former dry cleaner.

In 2010, as part of an IRM, the source area was removed which removed a significant portion of the waste/source area identified at the site, some impacted soil remains inaccessible under the building. Therefore, no remedial alternatives will be evaluated to address the waste/source area.

The waste/source areas identified at the site were addressed by the IRM(s) described in Section 6.2.

Groundwater

Samples were collected from overburden groundwater which was encountered approximately 10 to 12 feet below grade surface (bgs). The samples were collected to assess the groundwater conditions on-site in the vicinity of the former dry cleaner as well as off-site and downgradient of the site. The groundwater samples were submitted for analytical analysis for VOCs, SVOC and metals.

The groundwater sampling results indicate that the primary contaminants are VOCs in the overburden groundwater associated with the historic use of PCE at the former dry cleaner. The groundwater VOC plume has been delineated to originate at the rear of the site property and continues downgradient toward East Pulteny Street. The highest concentrations of contaminants were found at the rear of the site building.

The post IRM groundwater sampling results indicate no groundwater standards are exceeded for tetrachloroethene (PCE) and its associated daughter products including cis-1,2-dichloroethene (cis-1,2-DCE), trichloroethene (TCE) and vinyl chloride (VC). Sodium was found at levels above SCGs, however sodium is naturally occurring and is not related to any on-site contamination. No SVOC, Pesticides or PCBs exceed their applicable SCGs.

Table #1 – Groundwater – Post IRM

Detected Constituents	Concentration Range Detected (ppb) ^a	SCG ^b (ppb)	Frequency Exceeding SCG
VOCs			
Tetrachloroethene	1.1 -4.7	5	0/2

a - ppb: parts per billion, which is equivalent to micrograms per liter, ug/L, in water.

b- SCG: Standard Criteria or Guidance - Ambient Water Quality Standards and Guidance Values (TOGs 1.1.1), 6 NYCRR Part 703, Surface water and Groundwater Quality Standards, and Part 5 of the New York State Sanitary Code (10 NYCRR Part 5).

Groundwater contamination identified during the RI was addressed during the IRM described in Section 6.2.

Soil

Soil samples were collected at the site ~~in~~ during the remedial investigation ~~RI~~, from on-site locations to further delineate the source area and to evaluate the possibility of a removal of contaminated soils. Soil samples were collected at the rear of the property, near the backdoor of the former dry cleaner for analytical analysis primarily for VOCs.

Soil sampling results were compared to the applicable Soil Cleanup Objectives (SCOs) for unrestricted use and restricted use/protection of groundwater, as discussed in Section 3, and indicate that the primary contaminants of concern on-site are VOCs. Based on the comparison of the soil sampling results to the restricted use SCOs, the protection of groundwater SCOs were selected for the evaluation of the data.

Only one of the post IRM confirmation samples had a PCE concentration that exceeded SCGs. This sample is located at the northern limit of the Site property and is immediately adjacent to an off-site building. While impacted soil appears to be present under the building it does not appear to be affecting groundwater quality, further excavation could not be completed in this area.

Table #2 – Soil

Detected Constituents	Concentration Range Detected (ppm) ^a	Unrestricted SCG ^b (ppm)	Frequency Exceeding Unrestricted SCG	Restricted Use SCG ^c (ppm)	Frequency Exceeding Restricted SCG
VOCs					
Tetrachloroethene	0.015-6.3	1.3	1/7	1.3	1/7
Trichloroethene	ND-0.0031	0.47	0/7	0.47	0/7
cis-1,2-dichloroethene	ND-0.0026	0.25	0/7	0.25	0/7

a - ppm: parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil;

b - SCG: Part 375-6.8(a), Unrestricted Soil Cleanup Objectives.

c - SCG: Part 375-6.8(b), Restricted Use Soil Cleanup Objectives for the Protection of Groundwater.

Soil contamination identified during the RI was addressed during the IRM described in Section 6.2.

Soil Vapor

The evaluation of the potential for soil vapor intrusion resulting from the presence of site related soil and groundwater contamination was evaluated by the sampling of off-site soil vapor, sub-slab soil vapor under the on-site building, and indoor air inside the on-site building. At this site due to the presence of buildings in the impacted area a full suite of samples were collected to evaluate whether soil vapor intrusion was occurring.

Soil vapor samples were collected from the sub-slab of the former dry cleaner. The samples were collected to assess if there was PCE impacted soil beneath the former dry cleaner and ~~for~~ to assess any resulting potential for soil vapor intrusion. The sampling results detected PCE detected in the sub-slab vapor and in the indoor air of the former dry cleaner.

Sample results were evaluated in accordance with the NYSDOH Soil Vapor Intrusion Guidance in order to determine whether actions were needed to address exposure via soil vapor intrusion. Based on the sampling results a soil vapor extraction system (SVE), beneath the slab of the former dry cleaner space, was installed to address contamination under the slab and possible exposure via soil vapor intrusion at the on-site building.

Soil vapor intrusion sampling at the on-site building, within other units of the strip mall will be conducted to verify the effectiveness of the SVE system. Additional actions will be implemented if the sampling results demonstrate that the SVE system operating is not effective in addressing exposure within all units of the on-site building.

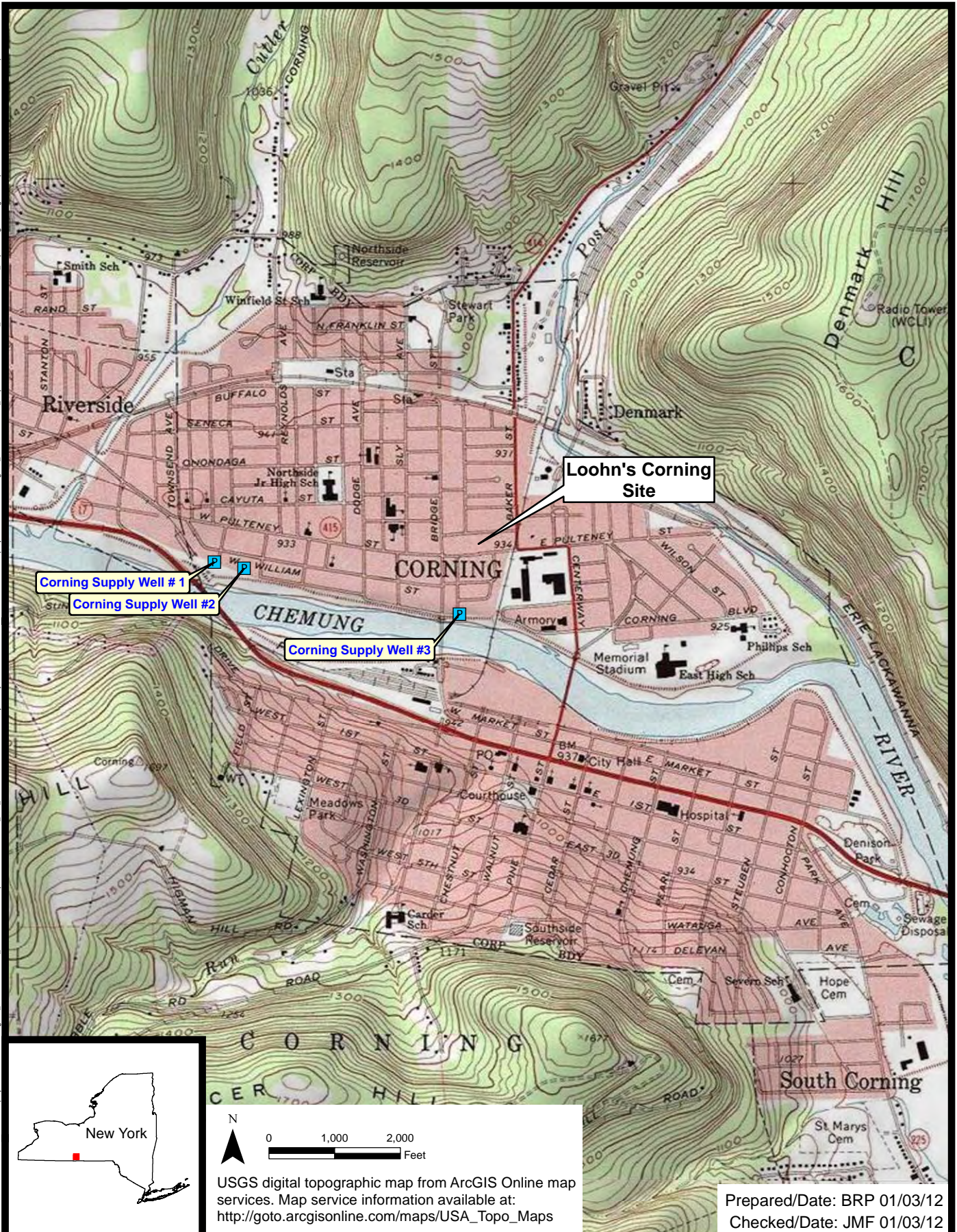
During the site characterization, three soil vapor samples were collected off-site to determine whether soil vapor contamination is migrating off of the site. The sampling results detected PCE in soil vapor at an off-site property immediately North of the site and at a location along East Pulteney Street.

To ensure that the SVE system is preventing migration of soil vapor contamination and preventing potential exposure via soil vapor intrusion at off-site structure adjacent to the site, soil vapor sampling will occur at off-site properties. This evaluation will include provisions for actions to be taken, including mitigation, if needed.

Soil vapor contamination identified during the RI was addressed during the IRM described in Section 6.2.

Table #3 – Remedial Objectives

Remedial Objectives	Remedial Action
1. Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.	- The removal of the source area and the installation of a soil vapor extraction (SVE) system at the former dry cleaner.
2. Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.	- The removal of the source area and the installation of a soil vapor extraction (SVE) system at the former dry cleaner.
3. Remove the source of ground or surface water contamination.	- The removal of the source area.
4. Prevent ingestion/direct contact with contaminated soil.	- The removal of the source area.
5. Prevent migration of contaminants that would result in groundwater or surface water contamination.	- The removal of the source area.
6. Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.	- The removal of the source area and the installation of a soil vapor extraction (SVE) system at the former dry cleaner.

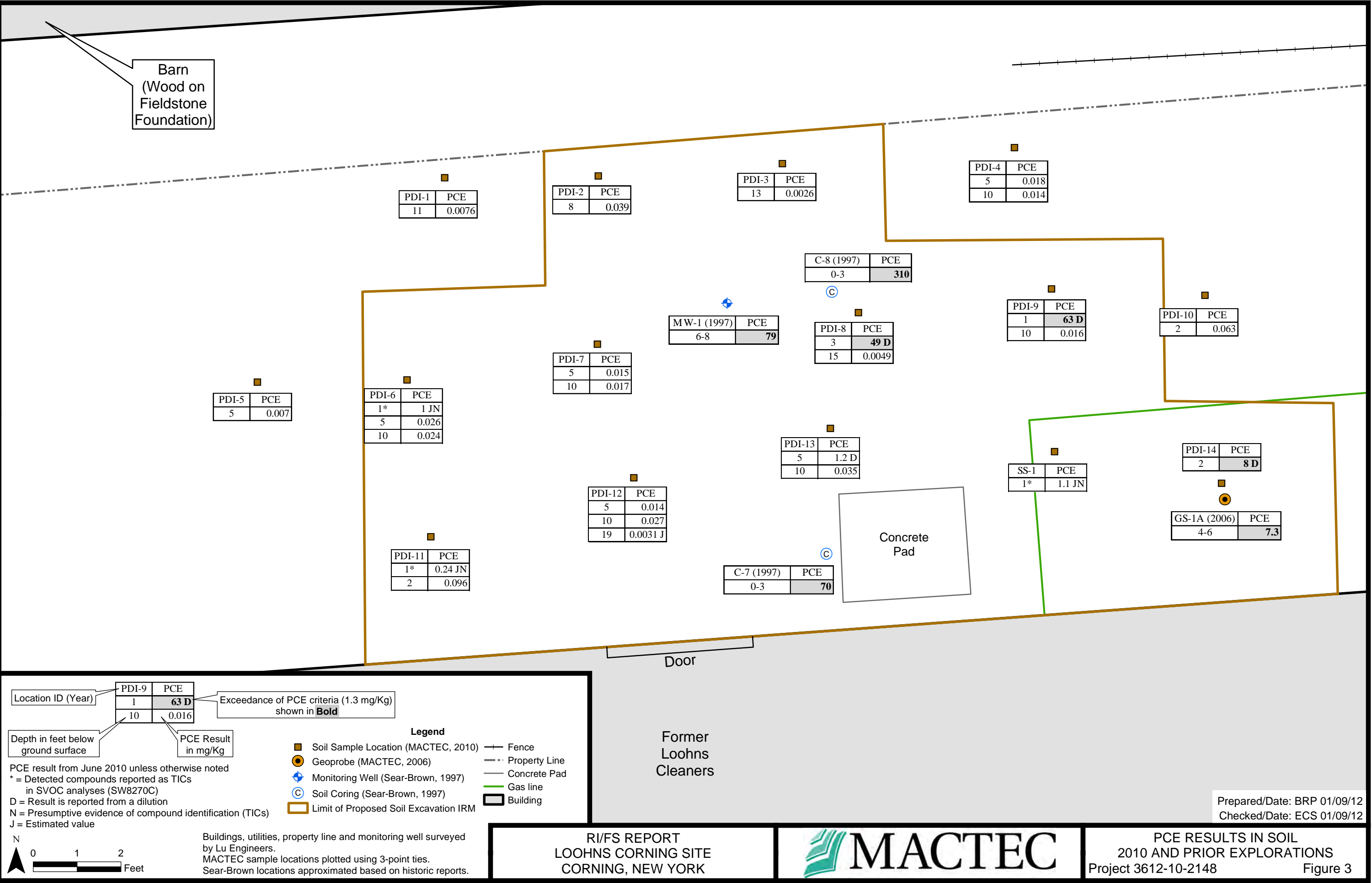


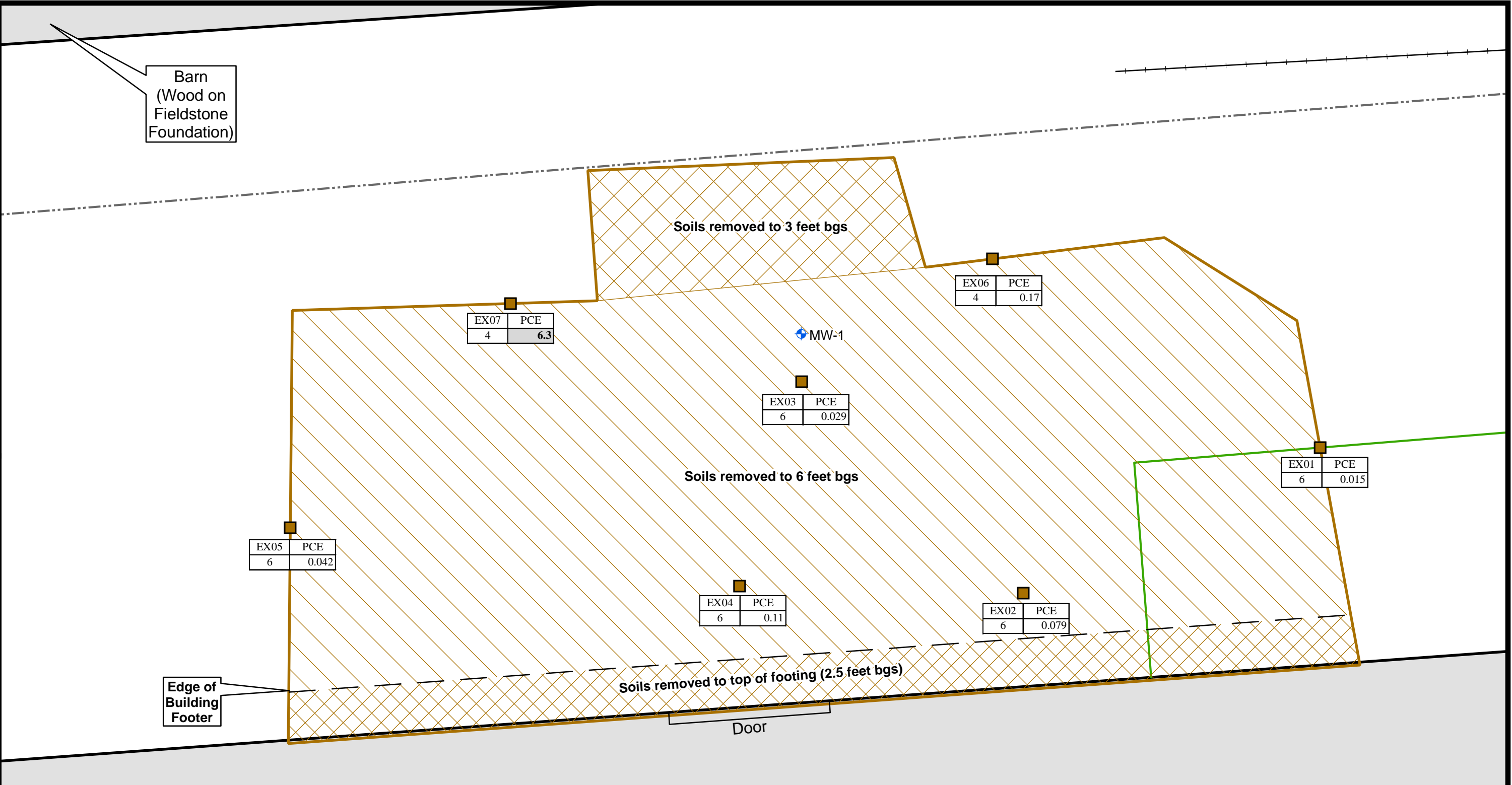
SITE #851028
LOOHNS CORNING SITE
CORNING, NEW YORK



SITE LOCATION
Project 3612-10-2148 Figure 1







Legend

- Documentation Sample Location
- Monitoring Well (Sear-Brown, 1997)
- Actual Limit of Excavation
- Fence
- Property Line
- Gas line
- Building

Location ID

Location ID	Depth (ft)	PCE Result (mg/Kg)
EX07	4	6.3

Exceedance of PCE criteria (1.3 mg/Kg) shown in **Bold**

Depth in feet below ground surface

PCE Result in mg/Kg

Buildings, utilities, property line and monitoring well surveyed by Lu Engineers.
Excavation and sample locations surveyed by James D. Evans

Former Loohns Cleaners

RI/FS REPORT
LOOHN'S CORNING SITE
CORNING, NEW YORK

SOIL IRM
EXCAVATION DOCUMENTATION SAMPLES
Project 3612-10-2148
Figure 4

Prepared/Date: BRP 01/09/12
Checked/Date: ECS 01/09/12

